**Amendments to the Specification:**

Please replace the paragraph beginning on page 8, line 8 with the following rewritten paragraph:

--The wavelength range for illumination and collection may be in the ultraviolet (UV) or the visible or the near infrared (NIR) in different embodiments. In the particular embodiment in FIG. 1, reflectometer assembly 100 comprises a broadband (UV, visible, NIR) reflectometer measurement system. Other embodiments may be narrowband or may comprise instruments other than a reflectometer. In FIG. 1, an illuminating light source (not shown) may be a UV Xenon lamp, fiber-coupled to the system shown in FIG. 1 via source fiber 103. Alternate embodiments have a tungsten lamp or a deuterium lamp or a xenon lamp. Relay optics 135 transfer collimated light from lens assembly 130 to beam splitter 104. The light transmitted directly through the beam splitter from the source fiber is referred to as the monitor beam. The monitor beam does not interact with measurement region 111. The portion of the illumination that the beam splitter directs toward the wafer is referred to as the measurement beam. The measurement beam reflects from the surface of the wafer, where its spectrum is modified by the presence of thin films on the wafer.--

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Please add the following paragraphs to the specification at page 18, line 12:

--Some characteristics of a measurement system change significantly with time, and others may be substantially constant. In a preferred embodiment of this invention, an arc lamp is the light source. Flickering of the arc in its housing produces very fast changes. Bending or flexing of source fiber 103 (see FIG. 1) and changing an optical path length due to scanning may give rise to fast changes. Aging of the lamp may produce slow changes.

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According to aspects of this invention, dual spectrographs may collect two spectra essentially simultaneously, a reflection spectrum from the sample under test and the monitor spectrum that does not interact with the sample under test, as shown in FIG. 1.--

Please add the following paragraphs to the specification at page 18, line 19:

--In FIG. 1, a beam splitter divides the reflected beam from the monitor beam, which proceeds straight through the beam splitter to the spectrograph 141. The reflected beam proceeds from the beam splitter, through the objective and to the sample, back through the

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objective and beam splitter to a mirror which deflects it parallel to the monitor beam to spectrograph 140. It is understood that the paths from the beam splitter and mirror to the respective spectrometers may include other optical components which are not shown in FIG. 1 but are, in a preferred embodiment, as similar as possible for the two beams. In the case where the sample is the sample under test, e.g., a wafer that has just been polished, the reflection spectrum is the measurement spectrum S, and its associated monitor spectrum is $S_m$. The monitor spectrum is used to correct for rapid changes in the system, e.g., flickering of the illumination source.--

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